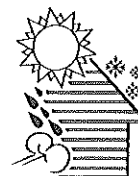


Work Order Bid (ID)

CAC Housing Energy Services



CAC Housing &
Energy Services

WORK ORDER INFORMATION

Work Order Name: WO/80008KN1870/1

Work Order Type: Weatherization

Audit Name: 80008KN1870-audit

CLIENT INFORMATION

Client ID: 80008KN1870

AGENCY INFORMATION

Agency: Knoxville- Knox County Community Action Agency

Agency Phone: (865) 244-3080

Address: (PO Box 51650) 2247 Western Avenue

Fax: (865) 544-1647

Knoxville, TN 37950-1650

Email Address:

Agency Contact: Neely, Richard

Work Phone: (865) 244-3080

Cell Phone:

Email Address: richard.neely@cachousing.org

Company Name & License Number: _____

Contractor's Signature: _____

COMMENT

`Comments

Single Family Dwelling

Contractor to follow 2006 International Residential Code as adopted by the City of Knoxville or Knox County as applicable.

City-House age is 1920

RRP Certified Firm/Renovator Required

Measures

Measure 1 Crawl Space Door

Components

Inspected

Comment Remove old door before installing new door. A door is installed as a complete unit. A door is inclusive of pad lock, hinges, hasp, pressure treated jambs, if not pressure treated, then paint(1st quality semigloss color to be chosen by homeowner or sand/stain/seal), No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide. All keys given to home owner not anyone else. If more than one crawlspace door installed, the pad locks to be keyed the same.

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Construction Mate	Crawl Space Door Refer to Attachment A- Standards for Weatherization Materials and Southeast Field Guide.	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:

Sub Total:

Field Notes:

Measure 2 Flex Duct (14") 3 ft at return area**Components****Inspected****Comment**☐

Flex Duct must be sized correctly. Flex Duct to be installed with straightest and shortest route, Must be secured with straps to alleviate sagging, and must be pulled tight so that inner liner is fully stretched out. Must have a minimum of R-8 insulation around it. Must be attached with zip tie and then taped with appropriate UL 181 tape. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Unspecified	Flex Duct	Linear Foot	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	labor	Linear Foot	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 3 Return Box**Components****Inspected**

Comment Return box made of 28 gauge galvanized metal. Use S-lock to join metal. Liquid Mastic to be applied to return box to seal all seams. Seal front of return box where it meets return register with appropriate caulk. Insulate with R-8 Minimum. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide.

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Construction Mate	Return Box	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	Labor Refer to Attachment A- Standards for Weatherization Materials and Southeast Field Guide.	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 4 Return Register**Components****Inspected**

Comment Return register to be replaced with same size. Return register to be sealed to existing return box and homeowner provided w/ 6 filters of that size. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide.

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Construction Mate	Return Register Refer to Attachment A- Standards for Weatherization Materials and Southeast Field Guide.	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 5 Infiltration Redctn	Components	Inspected
Comment Energy Measures		<input type="checkbox"/>
<p>Air Sealing Measures</p> <p>Reduce air infiltration with 94 air seals. Each air seal is equal to 100 cfms. It is the responsibility of the contractor to find the air leaks. This is best performed with a Blower Door. Contractor must meet or exceed the targeted #. A house must not be brought below 1500 cfm @ 50 pascals. No CHANGE ORDER for air seals below the targeted #.</p> <p>"Open" Ring, Front Door, Pre 14986 CFM @ 50 pascals. Target is 5586 CFM @ 50 PA</p>		
<p>fireplace seal qty 3</p> <p>It is the responsibility of the contractor to seal fireplace opening with 1/2" (BC Grade) plywood painted owner's choice. Install 2 handles and seal edges with 1/2" pipe insulation with corners mitered. Insert into fireplace opening creating a tight fit. Install a permanent notice in fireplace to remove all Seal materials before using. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.</p>		
<p>Weatherstrip d1,d2</p> <p>Remove old weatherstripping before installing new weatherstripping. Weatherstrips must be one solid piece. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide.</p>		
<p>Sweep d1,d2</p> <p>Remove old door sweep before installing new door sweep. Door Sweep must be one solid piece. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.</p> <p>NOTE: Rubber Door Bottom for Prehung Metal Door.</p>		
<p>Broken pane w3,w4</p> <p>. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.</p>		
<p>Glaze windows s2,e1,e5,n2,n3,n4,n5,w2,w3,w4</p> <p>All loose glazing must be 100% removed. Push points installed as needed. New glazing should be even, smooth, and all look uniform. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. NOTE: Silicone, caulk, or any other product that is not window glazing is not acceptable.</p>		
<p>Mastic 6 supply boots</p> <p>Liquid white Mastic to be applied to entire inside of boot to seal all seams. Top of boot where it meets ceiling, wall or subfloor to be caulked or foamed. Boots to be insulated on outside of boot</p>		

to R-8. This is
 best performed with 2-part close cell foam. No changes allowed. Refer to
 Appendix A- Standards for
 Weatherization Materials and Tennessee Weatherization Field Guide.
 NOTE: When post audit is performed, all boots must be below 1 pascal with
 none over 3 pascals and not
 more than 3 boots over 1 pascal but less than 3 pascals.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Miscellaneous Su	fireplace seal	Each	3					
1	Labor	labor	Each	3					
2	Doors	weatherstrip	Each	2					
2	Labor	labor	Each	2					
3	Labor	labor	Each	2					
3	Doors	sweep	Each	2					
4	Windows	broken pane	Each	2					
4	Labor	labor	Each	2					
5	Labor	labor	Each	10					
5	Windows	glaze	Each	10					
6	Labor	labor	Each	6					
6	Heating Equipmen	mastic supply boot	Each	6					

Other Detail

Measure Sub Total:

Sub Total:

Field Notes:

Measure 6 Lighting Retrofits**Components** I1,I2,I3,I4,I5,I6,I7**Inspected****Comment** Lighting

Replace incandescent light bulb with compact fluorescent bulb equal to the incandescent. Inform customers about proper recycling of fluorescent bulbs by stores, municipal waste departments, or other recycling organizations. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Lighting	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Lighting	Compact Fl. - 18 Watt	Each Lamp	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	Labor	Compact Fl. - 18 Watt	Each Lamp	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	Lighting	Compact Fl. - 18 Watt	Each Lamp	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6	Labor	Compact Fl. - 18 Watt	Each Lamp	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7	Lighting	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8	Labor	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9	Lighting	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
10	Labor	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
11	Lighting	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
12	Labor	Compact Fl. - 18 Watt	Each Lamp	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
13	Lighting	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14	Labor	Compact Fl. - 18 Watt	Each Lamp	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:**Measure 7 DWH Tank Insulation****Components****Inspected**

Comment Water heaters should be re-insulated to at least R-10 with an external insulation blanket unless water heater label gives specific instructions not to insulate or the water heater is already insulated. Keep insulation at least 2 inches away from gas valve and burner access panel. Don't install insulation below the burner access panel. Flammable Vapor Ignition Resistant models have combustion intake vents that must be left open. Follow the manufacturer's instructions when installing insulation blankets on (FVIR) water heaters so to not damage unit. Don't cover the pressure relief valve and discharge pipe with insulation. Don't insulate the tops of gas fired water heaters to avoid obstructing drat diverter. Mark the blanket to locate the thermostat and heating element access plates or cut the blanket at these locations. When you cut the blanket , cut the bottom and the sides but not the top. This creates a flap that remains closed in place. Don't cover the pressure relief valve and discharge line. Cover the top of the water heater with insulation if it doesn't obstruct the pressure relief valve. Install three zip tie straps 1st 6" from the top 2nd in the Middle, 3rd- 6" from Bottom).

☐

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Hot Water Equipm	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 8 DWH Pipe Insulation**Components****Inspected**☐

Comment Includes labor cost. Insulate the first 6 feet of hot and cold water pipe from water heater. Use pipe wrap with a R-value of at least 2. Cover elbows, unions, and other fittings to the same thickness as pipe. All corners must be Cut properly. Keep pipe insulation 6 inches away from single wall vent pipe and 1 inch away from Type B vent. Interior diameter of pipe sleeve must match exterior diameter of pipe. Fasten with zip ties, tape, or other approved method. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	DHW Pipe Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	DHW Pipe Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Comment

☐

Floor Insulation

Includes labor cost. Contractor's responsibility to seal penetration in floor before installing insulation. Contractor to install using Resnet Grade 1 Standards. Insulation faced or unfaced is installed to maintain permanent contact with the subfloor above (paper side against subfloor) including necessary supports (e.g. staves for blankets). Insulation to have NO gaps, voids, or compressions. ✓ Install R19 insulation between floor joists. ✓ Insulation should be installed snugly against the floor and without voids or gaps. ✓ Insulation should fit snugly around cross bracing and other obstructions. ✓ securely fasten batt insulation to framing with insulation hangers, plastic mesh, or other supporting material. Insulation should contact subfloor to prevent convecting air above the insulation from reducing its R-value. ✓ Faced insulation should be installed with the foil or kraft facing placed up towards the floor sheathing. The batt should fill the whole cavity If insulation is supported by lath or plastic twine underneath. For batts that do not feel the whole cavity, use wire insulation supports. It is important that ground moisture barrier is properly installed in the crawlspace to protect the insulation and ensure proper R-value is achieved. Floor insulation should fit tightly against the rim joist. ✓ If balloon framed, air seal stud cavities prior to installing floor insulation. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

- The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.
- For wall insulation a certificate should be secured on a wall in the attic if possible.
- A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.
- For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.
- For loose-fill insulation, the certificate must be dated and signed by the

Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.

•Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.

•For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

Dryer Vents installed with damper. Metal pipe installed without any fasteners protruding through pipe.
Must be vented to outside of home. No changes allowed. Refer to Attachment A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. Contractor to follow 2006 International Residential Code as adopted by the City of Knoxville or Knox County as applicable.

#	Material / Labor	Description / Comment	Units	Estimated			Actual		
				Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Floor Insulation - Fiberglass Faced Batt - R-19	SqFt	1640					
1	Labor	Floor Insulation - Fiberglass Faced Batt - R-19	SqFt	1640					

2	Miscellaneous Su	dryer vent	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 10 Wall Insulation**Components** wall 1, wall 2, wall
3, wall 4**Inspected****Comment**☐**Wall Insulation**

Includes labor cost. Contractor must use a dense pack blowing machine. Contractor must dense pack cellulose insulation at 3.5 pounds per square foot and fiberglass dense pack must be 2.2 pounds per square foot. Contractor's responsibility to install wood or Styrofoam plugs in holes after installing wall insulation. Contractor's responsibility to repair wall damage interior or exterior if needed while installing wall insulation. Contractor to clean up area around house and clean siding off after measure completed. Insulation should cover the entire area intended for insulation without voids or edge gaps. Blown insulation should be installed at sufficient density to resist settling, according to manufacturer's instructions. Wall cavities should be filled with insulation completely, from top to bottom and side to side. If insulated from the inside. Holes drilled for insulation must be returned to an appearance as close to original as possible or satisfactory to the customer. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

- The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.
- For wall insulation a certificate should be secured on a wall in the attic if possible.
- A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.
- For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.
- For loose-fill insulation, the certificate must be dated and signed by the Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.

•Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.

•For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

#	Material / Labor	Description / Comment	Units	Estimated			Actual		
				Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Wall Insulation - Cellulose, Blown - 2x4 Filled	SqFt	1122	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Wall Insulation - Cellulose, Blown - 2x4 Filled	SqFt	1122	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:

Sub Total:

Field Notes:

Comment



Attic Insulation

Includes labor cost. Contractor to install 1 ruler for every 300 square foot of attic space showing depth of insulation. Insulation should cover the entire area intended for insulation without voids or edge gaps. Blown insulation should be installed at sufficient density to resist settling, according to manufacturer's instructions. Loose fiberglass is blown in attics from 0.5 to 0.9 pcf and at that density the R-value is around 3.2 per inch. Loose cellulose is blown in attics from 0.6 to 1.2 pcf and at that density range, the R-value is around 3.7 per inch. Insulation should be protected from air migrating around and through it by an effective air barrier. Air sealing attics must precede attic insulation and this may require removing existing insulation and debris that currently prevent effective air sealing. Box around recessed light fixtures and exhaust fans to prevent overheating and/or fire. Install collars or dams around masonry chimneys, B-vent chimneys, and manufactured chimneys after sealing the air leaks around them. ✓ If rolled metal is used as a barrier around heat-producing devices or chimneys, it must be fastened securely to the ceiling joist so the barrier won't collapse. Barriers should extend at least 4 inches above the insulation and be secured to keep insulation a minimum of 3 inches away from the heat-producing device. ✓ All-fuel wood-stove chimneys should have ventilated insulation shields. Covering recessed light fixtures: Covering recessed light fixtures with fire-resistant drywall or sheet-metal enclosures reduces air leakage and allows insulation to be blown around the box. ✓ If you plan to cover an electrical junction box with insulation, mark its location with a sign, flag, or other marker.

Install baffles in every joist or truss bay to ensure no insulation enters the soffit area. Seal holes, gaps, and penetrations in attic before insulating. Seal around chimney with sheet metal and high temperature silicone or fire resistant foam. Install R-30 fiberglass batt secured to attic access and weather strip with foam tape. Contractor to install using Resnet Grade 1 Standards. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

- The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.
- For wall insulation a certificate should be secured on a wall in the attic if possible.

- A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.

- For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.

- For loose-fill insulation, the certificate must be dated and signed by the Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.

- Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.

- For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

Cut in the ceiling an attic access door 22" x 30". If unable to achieve, then opening must be equal to 660 square inches 22" x 30". An attic access door is installed as a complete unit. A door is inclusive of foam seal, trim, paint (1st quality semi gloss color to be chosen by homeowner, caulk, and R-30 Batt insulation. Build an insulation dam around the attic access hatch. Insulate the hatch to R-30 value. Build the dam with rigid materials like plywood or oriented strand board so the dam supports

the weight of the person entering or leaving the attic. Weatherstrip the attic access to air seal the access and provide uninterrupted air barrier between the attic and conditioned space. It is the best practice to seal hatches in the unconditioned space such as carports and attached garages and stairwells. All attic hatches must have a locking device that securely hold the access in place and slightly compresses the weatherstripping.. Do not cut the framing member to install a hatch without approval from a local agency, a structural engineer, and local codes enforcement if applicable. The dam's purpose is to prevent loose-fill insulation from falling out of the attic hatch when opened. Install latches, sash locks, gate hooks or other positive closure to provide substantially airtight hatch closure. No changes allowed . Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Attic Insulation - Fiberglass, Blown - R-30	SqFt	1640					
1	Labor	Attic Insulation - Fiberglass, Blown - R-30	SqFt	1640					
2	Miscellaneous Su	attic access	Each	1					
2	Labor	labor	Each	1					
Other Detail									
Measure Sub Total:							Sub Total:		

Field Notes:

Measure 12 Storm Windows**Components** n4**Inspected****Comment** Windows☐

Includes labor and material. Refer to House diagram for estimated measurements. Responsibility of contractor to verify measurements in the field before ordering window(s). Contractor to include the thermal break, caulking, framing, and any other related items to convey a completed measure. Storm Windows should be sized correctly and fit tightly in the opening. Caulk storm windows around the frame except for weep holes at the bottom that must not be sealed. If weep holes are not manufactured into the storm they should be drilled. Don't allow storm windows to restrict or ventilation through movable windows. Choose windows that are openable from the inside or install pin on storm sashes that open along with the moveable primary window..Replacement windows must have a U-Factor less than or equal to U-0.35 as rated by the National Fenestration Rating Council or approved equal.

#	Material / Labor	Description / Comment	Units	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Other	Storm Window/labor	Each Window	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Windows	Storm Window	SqFt	27.75	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 13 CO Monitor is Needed**Components****Inspected**

Comment Refer to Appendix A- Standards for Weatherization Materials
and Tennessee Weatherization Field Guide.

☐**Estimated****Actual**

#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	CO monitor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total:**Sub Total:****Field Notes:**

Measure 14 Practice Lead Safe Weatherization (Wall Insulation) Components

Inspected

Comment



RRP Lead

A Certified Firm /Renovator is required to adhere to EPA RRP rules. Need to submit copy of Lead Report

1.Three photos of each feature disturbed by the RRP work. If you work on 3 sides of a house to blow in insulation, there needs to be 3 photos of each side. If you replace 2 doors and both will not fit in one photo shot, then you need 3 separate photos of each door.

2.Photo 1 of each feature:

A.Show surface to be worked on prior to commencing work. The photo should show the feature before work is started. It would be best to move flower pots, lawn furniture, etc. if possible prior to this photo. Exterior photos need to show the whole feature, ie side, of the house in one shot. If you cannot get back far enough to do this you need to take sufficient photos to show the complete feature.

B.The instructions are not specific as to whether or not the plastic and barrier needs to be in place for this photo. I feel that it is better to show the area without plastic to be a reference point as to what was there when you started.

3.Photo 2 of each feature:

A.Have the barrier and plastic in place and work under way for this photo.

B.Show the plastic fastened up the side wall as described in the booklet and the plastic extended 10' from any wall being worked on for exterior and 6' for interior work. This includes 10' or 6' beyond a corner.

C.Show your barrier in place 20' from the work surface on the exterior.

D.Show that you have covered interior window surfaces, covered HVAC vents and closed doors to the work area.

E.Show that you closed windows and doors near exterior work surfaces and covered doors in use with plastic as described in the booklet.

F.Show that you covered furniture flower pots etc. within the work area.

4.Photo 3 of each feature:

A.Show the plastic neatly rolled up and sealed ready for disposal.

B.Have barriers down.

C.Have the place cleaned up, ready to leave.

D.On interior surfaces, show your dust wipe if you used one. May require a 4th photo for this.

5.The purpose of the photos is not to evaluate your worker's personal hygiene or to show how neat holes are drilled. Stay back far enough to get as much of the required information in one photo as possible.

6.These photos are a permanent record and they document whether or not you attempted to follow the proper procedures for the RRP work. If your photos do not show that you did the RRP work correctly then they could provide the basis for a fine if they are audited at a later date. Remember we are not the EPA and by accepting your documentation, we are not agreeing that you satisfied all of EPA requirements. This documentation is for CAC to have documentation in the file to pay you for that measure since we are not on site at the time it is being completed. Plus, this is the type of documentation you should keep in your file for RRP, if the EPA ask for it.

#	Material / Labor	Description / Comment	Units	Estimated			Actual		
				Qty	Unit Cost	Total	Qty	Unit Cost	Total

Client ID: 80008KN1870

Work Order Bid (ID)
WO/80008KN1870/1
Report Run On: 9/22/2011

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1	Health and Safety	EPA RRP Lead Rules North Walls	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Health and Safety	EPA RRP Lead Rules South Walls	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Labor	labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Health and Safety	EPA RRP Lead Rules East Walls	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	Health and Safety	EPA RRP Lead Rules West Walls	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	Labor	labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

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Measure Sub Total:

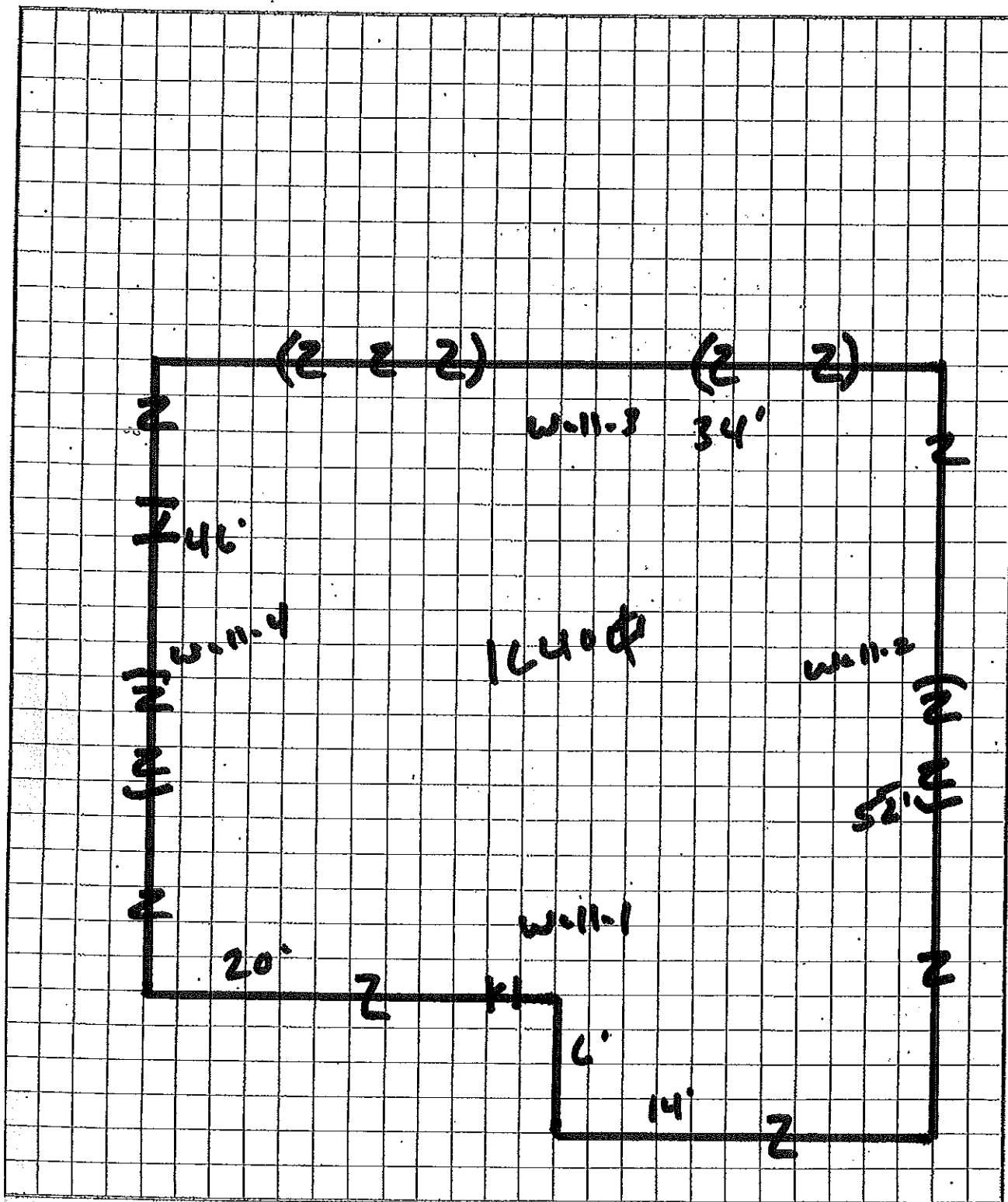
Sub Total:

Field Notes:

Work Order Grand Total:

Grand Total:

Site Diagram



Client Name:
 Client ID:
 Alt. Client ID:

NEAT Data Collection Form
 Form Run On: 11/23/2009

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